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ABSTRACT

Presented is a comparison of the Texas Education Agency Essential Objectives for Mathematics and the instructional concepts of the Conceptually Oriented Mathematics Program (COMP). COMP is a management program of 25 levels of mathematics instruction in 10 broad concept areas. Listed are relevant steps, levels, and strands of COMP for each of the 24 Essential Objectives. (MK)

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MATHEMATICS COMPARISON

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KILGORE, TEXAS

SE 029 433

Math Comparison

TEA Objectives/COMP

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Introduction

This document is a comparison of the Texas Education Agency Essential Objectives for Mathematics with the instructional concepts of the Conceptually Oriented Mathematics Program (COMP). COMP is one of several mathematics programs validated by the U. S. office of Education and disseminated by the National Diffusion Network (NDN) as exemplary. COMP is a management program of twenty-five levels of mathematics instruction in ten broad concept areas for grades one through eight. Developed in the Columbia, Missouri Schools during the early 1970's, the COMP program has had wide use in TEXAS and this report is designed to aid educators in preparing student instruction congruent with the mathematics objectives for the state.

The Essential Objectives are organized by mid-point and exit level objectives measured by the sixth and eleventh grade criterion-referenced tests in mathematics. They are not prof red as a comprehensive coverage of the entire domain of mathematics, but should be viewed as selected important features of the total mathematics curriculum. COMP is a comprehensive mathematics program and includes objectives that are not identified by the Texas Essential Mathematics objectives.

The analysis format is divided into two sections, the first for the mid-point objectives and the last for the exit level objectives. The reference to level, step, and strand is related to the scope and sequence for the COMP management system. The spiral design of the COMP curriculum results in an objective being presented more than once during a student's primary instructional years. The exit level objectives are included to

illustrate the comprehensive nature of the COMP instruction format realizing that these objectives may be taught in some secondary course such as Related Mathematics or Fundamentals of Mathematics.

In those cases where the COMP program provides an extended level of student understanding of a concept a dashed line is made across a page to illustrate the concept is presented beyond the TEA essential objective criteria. In those areas of Exit Level Objectives where concepts are not taught in the eight grades covered by COMP an asterisk is used.

This document is intended for the use of Texas teachers implementing the COMP instructional management system and developing plans to meet the accreditation requirements of the Texas Education Agency. One copy of this document was sent to each of the twenty service centers in the state as a courtesy and is available from them for other interested educators.

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 1. Identify from a group of two-dimensional figures a circle, a quadrilateral, a parallelogram, a square, a rectangle, and a triangle.

LEVEL	STEP	STRAND	CONCEPT
1	A	Geometry	Identifying common geometric shapes (circle, square, triangle, rectangle)
8	A	Geometry	Naming triangles, squares, rectangles, quadrilaterals, and parallelograms

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE:

2. Arrange a group of numbers into ascending order (limit to 4–digit whole numbers.)

LEVEL	STEP	STRAND	CONCEPT
1	B	Order	Comparing two numbers, 0–10
2	A	Order	Ordering the numbers 10–99
2	B	Order	Comparing numbers 10–99
4	B	Order	Counting and ordering three–digit numerals
5	A	Order	Comparing 2 threedigit numerals
7	A	Order	Using the symbols for greater than, less than, and equal to with four–digit numerals
8	C	Order	Extending the understanding of greater than and less than to five–digit , six–digit and seven–digit numerals (Concept appearing below the dotted line is an extension of the objective requirement.

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE:

3. Demonstrate the ability to interpret place value (limit to 5–digit numbers.)

LEVEL	STEP	STRAND	CONCEPT
2	A	Numeral	Developing the principle of place value using a two-digit numeral (10–99)
4	B	Numeral	Reinforcing the principle of place value using a three–digit numeral (to 399)
5	A	Numeral	Extending place value to 999
7	A	Numeral	Naming place value to thousands (1000–9999)
8	C	Numeral	Naming place to millions (10,000–9,999,999)
10	B	Numeral	Naming place value to billions

(Concepts appearing below the dotted line are extensions of objective requirements.)

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE:

4. Read and write five--digit numerals (verbal or numeric form.)

LEVEL	STEP	STRAND	CONCEPT
2	A	Numeral	Developing the principle of place value using a two–digit number
4	B	Numeral	Reinforcing the principle of place value using a three–digit numeral (to 399)
5	A	Numeral	Extending place value to 999
7	A	Numeral	Naming place value to thousands
8	C	Numeral	Naming place value to millions
10	B	Numeral	Naming place value to billions
			(Concepts appearing below the dotted line are extensions of objective requirements.)

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE:

5. State, in writing, the factors of a given number.

LEVEL	STEP	STRAND	CONCEPT
8	C	Division	Finding factors of a product (less than 50)
11	A	Numeral	Finding common factors
13	B	Numeral	Finding prime factorization using factor trees
17	A	Numeral	Introducing prime factorization by division
13	B	Sets	Naming the greatest common factor of two numerals by listing the factors, identifying the common ones, and choosing the largest common factor
17	B	Sets	Finding LCM and GCF by using prime factorization
			(Concepts appearing below the dotted line are extensions of objective requirements.)

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 6. Add a column of five numbers, where (1) the quantity of digits in the numbers varies but numbers are limited to four-digit, and (2) regrouping is required.

LEVEL	STEP	STRAND	CONCEPT
12	A	Addition	Adding an unlimited number of addends, each having 4 to 6-digits

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 7. Perform subtraction using four–digit numbers and regrouping, and relate subtraction to addition.

LEVEL	STEP	STRAND	CONCEPT
12	A	Subtraction	Subtracting numbers of 4 to 6–digit with renaming

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE:

8. (a.) Show the relationship between multiplication and addition.

LEVEL	STEP	STRAND	CONCEPT
5	A	Multiplication	Multiplying with 2 as a factor
5	B	Multiplication	Multiplying with 5 as a factor
6	A	Multiplication	Multiplying with 3 as a factor
6	B	Multiplication	Multiplying with 4 as a factor
7	A	Multiplication	Multiplying with 6–7 as a factor
8	A	Multiplication	Multiplying with 8–9 as a factor
9	A	Multiplication	Multiplying with a 1–digit factor and a 2–digit factor, with or without renaming
10	A	Multiplication	Multiplying with a three or four–digit factor and a one–digit factor
11	A	Multiplication	Multiplying with both factors ten or greater than ten
12	A	Multiplication	Multiplying with one 2–digit factor and one 3–digit factor

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE:
8. (b.) Show the relationship between multiplication and division.

LEVEL	STEP	STRAND	CONCEPT
5	A	Division	Division with 2 as a factor
5	B	Division	Division with 5 as a factor
6	A	Division	Division with 3 as a factor
6	B	Division	Division with 4 as a factor
7	A	Division	Division with 6–7 as a factor
8	A	Division	Division with 8–9 as a factor
9	A	Division	Dividing with a two–digit product and one-digit factor with or without remainder
10	A	Division	Dividing a 3 or 4-digit product by a 1-digit factor with or without a remainder
12	A	Division	Dividing a 3-digit dividend by a 2–digit divisor with a remainder
13	A	Division	Naming the quotient using a 4–digit dividend with a 2–digit divisor
16	B	Division	Finding the quotient using standard form when the dividend contains 5-digits and the divisor two–digits

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE:

9. Multiply numbers where regrouping is necessary (limit to 3-digit numbers.)

LEVEL	STEP	STRAND	CONCEPT
9	A	Multiplication	Multiplying with a one-digit factor and a two-digit factor, with or without renaming
9	B	Multiplication	Multiplying with a one-digit and a two-digit factor, with or without renaming (word problems)
10	A	Multiplication	Multiplying with a 3 or 4-digit factor and a one-digit factor
10	B	Multiplication and Division	Solving word problems using multiplication involving 3 and 4-digit factors by 1-digit factor or division involving 4-digit product by 1-digit factor
11	A	Multiplication	Multiplying with both factors ten or greater than ten
11	B	Multiplication and Division	Solving word problems using multiplication involving two 2-digit factors or division involving 3-digit product (dividend) and 2-digit factor (divisor)
12	A	Multiplication	Multiplying with one 2-digit factor and one 3-digit factor
13	B	Multiplication	Solving multiplication in word problems with n-place factors

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 10. Show whether two fractions having different denominators have the same value.

LEVEL	STEP	STRAND	CONCEPT
8	B	Order	Naming of equivalent fractions (using diagrams or number lines)
10	A	Numeral	Renaming fractional numbers using identity element
12	A	Order	Comparing fractional numbers

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 11. Add and subtract fractions having unlike denominators (limit to simple fractions).

LEVEL	STEP	STRAND	CONCEPT
11	A	Addition and Subtraction	Adding and subtracting fractional numbers with one fraction having a demoninator which is a multiple of the other denominator
13	A	Addition	Renaming fractional numbers with unlike denominators using the LCM and adding to find the sum
13	A	Sub traction	Naming the missing addend of fractional numbers with unlike denominators using the LCM

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 12. Demonstrate multiplication of fractions.

LEVEL	STEP	STRAND	CONCEPT
14	A	Multiplication	Multiplying a whole number by a unit fraction
14	B	Multiplication	Multiplying a whole number by a fractional number less than 1
14	C	Multiplication	Naming the product with both factors less than 1
15	A	Multiplication	Multiplying a whole number by a fractional number greater than 1
16	A	Multiplication	Computing the product of 2 mixed numerals

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 13. Translate the verbal statement of a simple fractional part of the whole into a fraction or a decimal number.

LEVEL	STEP	STRAND	CONCEPT
8	B	Numeral	Naming fractional value in fifths, sixths, and eights
14	B	Sets	Comparing cardinal numbers of two disjoint sets as a rate or ratio
15	A	Sets	Expressing as a fractional number the probability that a particular event or set of events may occur, compared with the total number of related events
20	C	Number Sentences And Phrases	Solving word problems using proportion

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE:

14. Perform estimations and solve problems involving addition and subtraction, using whole numbers, simple fractions and decimals.

LEVEL	STEP	STRAND	CONCEPT
Rounding			
16	A	Order	Rounding whole numbers to the nearest ten, hundred, and thousand
19	A	Order	Rounding decimal numerals
Problem Solving			
4	B	Addition and Subtraction	Solving word problems involving addition and subtration with a sum of 15 or less
5	B	Addition and and Subtraction	Solving word problems involving addition and subtraction with sums of 18 or less
6	C	Addition and Subtraction	Solving word problems involving renaming two-digit numerals with two or more addends
7	B	Addition and Subtraction	Solving word problems involving addition and subtraction with three-digit numerals
10	B	Addition and Subtraction	Solving word problems involving addition or subtraction of fractions with like denominators equal to or less than one
9	A	Sets	Solving two-stage problems, involving 2 sets of numbers

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 14. Continued

LEVEL	STEP	STRAND	CONCEPT
12	B	Addition, Subtraction, Multiplication, and Division	Solving two-stage word problems
20	C	Number Sentences and phrases	Solving word problems using proportion
*			COMP levels presently include concepts on rounding numbers and problem solving. The teacher may need to draw in exercises using estimation to correspond with the problem solving areas.

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 15. Perform estimations and solve problems involving multiplication and division, including whole numbers, simple fractions, and decimals.*

LEVEL	STEP	STRAND	CONCEPT
Rounding			
16	A	Order	Rounding whole numbers to the nearest ten, hundred, and thousand
17	A	Division	Naming square roots (estimating)
19	A	Order	Rounding decimal numerals
19	A	Division	Finding the quotient to the nearest tenth, hundredth, or thousandth
25	A	Order	Using order to estimate square roots
Problem Solving			
6	C	Multiplication	Solving word problems involving multiplication with 2,3,4, or 5 as a factor
6	C	Division	Solving word problems involving division with 2,3,4, or 5 as a factor
7	B	Multiplication and Division	Solving word problems involving multiplication and division with products not greater than 63
8	B	Multiplication and Division	Solving word problems involving multiplication and division with products not greater than 81

*COMP levels presently include concept on rounding numbers and problem solving. The teacher may need to draw in exercises using estimation to correspond with the problem solving area.

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 15. Continued

LEVEL	STEP	STRAND	CONCEPT
9	A	Sets	Solving two–stage word problems
9	B	Multiplication and Division	Solving word problems involving multiplication and division
10	B	Multiplication and Divsion	Solving word problems using multiplication involving 3 and 4–digit factors by 1–digit factor or division involving a 4–digit product by a 1–digit factor
11	B	Multiplication and Division	Solving word problems using multiplication involving two 2–digit factors or division involving 3–digit product (dividend) and 2–digit factor (divisor)
12	B	Addition, Subtraction, Multiplication and Division	Solving two-stage word problems

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 16. Use reference units of weight/mass, length, area, volume, temperature, time and money to estimate and determine measures, both metric and customary.

LEVEL	STEP	STRAND	CONCEPT
Weight/Mass			
11	B	Measurement	Weight-- changing ounces to pounds, pounds to tons, and their reversals
17	A	Measurement	Renaming the metric units of weight as other units of weight in the metric system
Length			
2	B	Measurement	Communicating measure through the use of nonstandard units
3	A	Measurement	Measuring to the nearest inch
3	C	Measurement	Measuring to the nearest half-inch
7	B	Measurement	Measuring line segments to the nearest one-fourth inch
8	B	Measurement	Using inches, feet, yards, and dozen in measurement
12	A	Measurement	Measuring a line segment to one eight inch
12	B	Measurement	Introducing the units of meter, millimeter, and centimeter in the meteric system

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 16. Continued

LEVEL	STEP	STRAND	CONCEPT
13	A	Measurement	Metric units of length: (mm, cm, dm, m, km)
19	A	Measurement	Measuring to the nearest unit (measurement to the nearest 1", ½", ¼" or 1/8"
Money			
1	C	Measurement	Introducing penny, nickel, and dime
4	A	Measurement	Counting money to 50 cents
5	A	Measurement	Making change to 50 cents
6	B	Measurement	Counting money to $1.00
6	C	Measurement	Making change to $1.00
9	B	Measurement	Making change involving money up to $10
Time			
2	A	Measurement	Telling time to the hour
3	B	Measurement	Telling time to the half hour

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 16. (Continued)

LEVEL	STEP	STRAND	CONCEPT
5	B	Measurement	Telling time to quarter of an hour
8	A	Measurement	Telling time to the nearest minute
Area			
8	B	Geometry	Measuring the area of a region
14	C	Geometry	Naming the area of a square, rectangle, parallelogram
24	A	Measurement	Metric units of area
Volume			
12	B	Geometry	Introducing volume of cubes and simple colsed surfaces
15	A	Geometry	Solving by formula the surface area or the volume of a rectangular prism
23	D	Geometry	Surface area and volume of pyramids and prisms
24	B	Measurement	Metric units of volume
24	C	Geometry	Finding the volume of cones, cylinders, and spheres

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 16. (Continued)

LEVEL	STEP	STRAND	CONCEPT
Temperature 10	B	Measurement	Reading the temperature on a Fahrenheit thermometer

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 17. Solve problems using linear area, volume, weight/mass, money, and temperature measures, both metric and customary.

LEVEL	STEP	STRAND	CONCEPT
6	C	Measurement	Making change up to $1.00
9	A	Measurement	Solving problems involving time
9	B	Measurement	Making change involving amounts of money up to $10
10	B	Measurement	Reading the temperature on a Fahrenheit thermometer
11	B	Measurement	Weight--changing ounces to pounds, pounds to tons, and their reversals
13	A	Measurement	Metric units of length
14	A	Addition	Naming the sum of demoninate addends
14	A	Subtraction	Naming the missing addends in demoninate numbers given the sum and one addend
14	C	Geometry	Naming the area of a square, rectangle, parallelogram
15	A	Geometry	Solving by formula the surface area or volume of a rectangular prism
17	A	Measurement	Renaming metric units of weight as other units of weight in the metric system

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 17. (Continued)

LEVEL	STEP	STRAND	CONCEPT
20	A	Measurement	Renaming metric units of capacity as other units of capacity in the metric system
23	D	Geometry	Surface area and volume of pyramids and prisms
24	B	Geometry	Surface area of cones, cylinders, and spheres
24	C	Geometry	Volume of cones, cylinders, and spheres

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

MID-POINT LEVEL

OBJECTIVE: 18. Read and interpret mathematical information on a map or graph.

LEVEL	STEP	STRAND	CONCEPT
3	A	Functions	Introducing picture and bar graphs
5	B	Functions	Number plane
9	B	Functions and Graphs	Reading ordered pairs graphed on a plane
11	A	Function and Graphs	Representing data on a linear or bar graph
14	B	Functions and Graphs	Locating a point on a plane using a number pair
16	B	Functions and Graphs	Mapping of one set into another set
20	Z	Measurement	Constructing circle and divided bar graphs
21	B	Functions and Graphs	Graphing ordered pairs of integers on a plane
21	Z	Measurement	Frequency Distributions

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 1. Demonstrate an understanding of the concept of decimal notation by using it to express numbers as great as ten million and as small as ten thousandths.

LEVEL	STEP	STRAND	CONCEPT
8	C	Numeral	Naming place value to millions
10	B	Numeral	Naming place to billion
15	B	Numeral	Naming a common fraction with 10 or 100 in the denominator as a decimal fraction
18	A	Numeral	Introducing the thousandth's place in decimal fractions*

*This concept could be extended to include decimal notation to the ten-thousandth's place

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE:

2. Demonstrate the ability to interpret place value.

LEVEL	STEP	STRAND	CONCEPT
1	A	Numeral	Counting a set to determine the cardinal number
4	B	Numeral	Reinforcing the principle of place value using a three-digit numeral
5	A	Numeral	Extending place value to 999
7	A	Numeral	Naming place value to thousands
8	C	Numeral	Naming place value to millions
10	B	Numeral	Naming place value to billions
15	B	Numeral	Naming a common fraction with 10 or 100 in the denominator as a decimal fraction
18	A	Numeral	Introducing the thousandth's place in decimal fractions

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE:

3. Use the addition facts through 10 + 10 in addition and subtraction processes, with computing aids as necessary.

LEVEL	STEP	STRAND	CONCEPT
6	A	Addition	Two or three place addition without renaming
6	A	Subtraction	Two or three place subtraction without renaming
6	B	Addition	Adding 2 or 3 digit addends involving renaming
6	B	Subtraction	Subtracting two-digit numerals which require renaming
6	C	Addition/ Subtra ction	Solving word problems involving renaming two-digit numerals with two or more addends
7	A	Addition	Adding three-digit numerals involving renaming
7	A	Subtraction	Subtracting three-digit numerals which require renaming
7	B	Addition / Subtraction	Solving word problems involving addition and subtraction with three-digit numerals
12	A	Addition	Adding an unlimited number of addends each having 4 to 6 digits
12	A	Subtraction	Subtracting numbers of 4 to 6 digits with renaming

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 3. Continued

LEVEL	STEP	STRAND	CONCEPT
12	B	Addition/ Subtraction/Multiplication/Division	Solving two stage word problems using all four operations

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 4. Use the multiplication facts through 10 X 10 in multiplication and division processes.

LEVEL	STEP	STRAND	CONCEPT
9	A	Multiplication	Multiplying with a one–digit factor and a two–digit factor, with or without renaming
9	A	Division	Dividing with a two–digit product and one–digit factor with or without renaming
9	B	Multiplication/ Division	Solving word problems involving multiplication and division
10	A	Multiplication	Multiplying with a 3 or 4–digit factor and a one–digit factor
10	A	Division	Dividing 3 or 4–digit products by a 1–digit factor with or without a remainder
10	B	Multiplication/ Division	Solving word problems using multiplication involving 3 and 4–digit factors by 1–digit factor or division involving 4–digit product 1–digit factor
11	A	Multiplication	Multiplying with both factors ten or greater than ten
11	A	Division	Dividing a 3–digit product by a 2–digit factor
11	B	Multiplication/ Division	Solving word problems using multiplication involving two 2–digit factors or division involving 3–digit product (dividend) and 2–digit factor (divisor)
12	A	Multiplication	Multiplying with one 2–digit factor and one 3–digit factor

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 4. Continued

LEVEL	STEP	STRAND	CONCEPT
12	A	Division	Dividing a 3-digit dividend by a 2-digit divisor with a remainder
12	B	Addition/ Sub traction/Mul- tiplication/Division	Solving two-stage word problems using all four operations
13	A	Division	Naming the quotient using a four digit dividend with a two-digit divisor
13	B	Multiplication	Solving multiplication in word problems with n-place factors
16	B	Division	Finding the quotient using standard form when the dividend contains five digits and the divisor two digits

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 5. Order a set of numbers in ascending or descending order (limit to 6-digit numbers).

LEVEL	STEP	STRAND	CONCEPT
1	B	Order	Comparing two numbers, 0–10
2	A	Order	Ordering the numbers 10-99
2	B	Order	Recognizing the inequality of 2 two-digit numerals
4	B	Order	Counting and ordering 3–digit numerals
5	A	Order	Comparing 2 three-digit numerals
7	A	Order	Using the symbols for greater than, less than, and equal to with four–digit numbers
8	C	Order	Extending the understanding of greater than and less than to five-digit, six–digit, and seven-digit numerals
12	A	Order	Comparing fractional numbers
19	B	Order	Arranging decimals in order
20	A	Order	Comparing fractional numbers using the comparison property

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 5. Continued

LEVEL	STEP	STRAND	CONCEPT
22	A	Order	Comparing rational numbers
24	A	Order	Comparing real numbers

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 6. Solve a simple problem involving the processes of addition, subtraction, multiplication and/or division.

LEVEL	STEP	STRAND	CONCEPT
4	B	Addition and Subtraction	Solving word problems involving additon and subtraction with a sum of 15 or less
5	B	Additon and Subtraction	Solving word problems involving addition and subtraction with a sum of 18 or less
6	C	Additon and Subtraction	Solving word problems involving renaming two-digit numerals with two or more addends
6	C	Multiplication	Solving word problems involving multiplication with 2,3,4, or 5 as a factor
6	C	Division	Solving word problems involving division with 2,3,4, or 5 as a factor
7	B	Multiplication and Division	Sovling word problems involving multiplication and division with products not greater than 63
8	B	Multiplication and Division	Solving word problems involving multiplication and division with products not greater than 81
9	A	Sets	Solving two-stage word problems involving 2 sets of numbers

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 6. Continued

LEVEL	STEP	STRAND	CONCEPT
9	B	Multiplication and Division	Solving word problems involving multiplication and division
10	B	Addition and Subtraction	Solving word problems involving addition or subtraction of fractions equal to or less than one with like denominators
10	B	Multiplication and Division	Solving word problems using multiplication involving 3 and 4–digit factors by a one–digit factor or division involving a 4–digit product by a one digit factor
11	B	Multiplication and Division	Solving word problems using multiplication involving two 2–digit factors or division involving 3–digit product (dividend) and 2–digit factor (divisor)
12	B	Addition, Subtraction Multiplication and Division	Solving two–stage word problems
13	B	Multiplication	Solving multiplication in word problems with n–place factors
16	A	Numeral	Writing equations and inequalities for word problems

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE:
6. Continued

LEVEL	STEP	STRAND	CONCEPT
20	C	Number Sentences and Phrases	Solving word problems using proportion
21	B	Number Sentences and Phrases	Solving word problems involving commission, interest, and discount
23	C	Number Sentences and Phrases	Translating word sentences into number sentences

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 7. Estimate answers to simple equations statements & solve simple equations.

LEVEL	STEP	STRAND	CONCEPT
16	A	Numeral	Writing equations and inequalities for word problems
22	B	Number Sentences and Phrases	Evaluating open number phrases
22	C	Number Sentences and Phrases	Using replacement set to find solution set
22	D	Number Sentences and Phrases	Solving equations by inspection (rational numbers)
23	A	Number Sentences and Phrases	Solving equations using addition property of equality
23	B	Number Sentences and Phrases	Solving equations using multiplication property of equality
23	D	Number Sentences and Phrases	Using equations in one variable
23	Z	Number Sentences and Phrases	Equations with absolute value

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE:

8. Add, subtract, multiply and divide fractions and decimal numbers.

LEVEL	STEP	STRAND	CONCEPT
10	A	Addition	Adding fractions with like denominators whose sum would be less than or equal to one
10	A	Subtraction	Subtracting fractions with like denominators
10	B	Addition/Subtraction	Solving word problems involving addition or subtraction of fractions with like denominators
11	A	Addition/subtraction	Adding and subtracting fractional numbers with one fraction having a denominator which is a multiple of the other denominator
13	A	Addition	Renaming fractional numbers with unlike denominators using the LCM and adding to find the sum
13	A	Subtraction	Naming the missing addend of fractional numbers with the unlike denominators using the LCM
13	B	Addition	Adding fractional numbers with one addend greater than one
13	B	Subtraction	Subtraction of mixed numberals without regrouping
14	A	Multiplication	Multiplying a whole number by a unit fraction

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE:
8. Continued

LEVEL	STEP	STRAND	CONCEPT
14	A	Division	Dividing by using multiplication with the reciprocal
14	B	Multiplication	Multiplying a whole number by a fractional number less than one
14	C	Multiplication	Naming the product with both factors less than one
15	A	Addition	Adding mixed numerals and naming the sum in simplest form
15	A	Subtraction	Subtracting a fractional number from a whole number
15	A	Multiplication	Multiplying a whloe number by a fractional number greater than one
15	B	Addition	Naming the sum of 2 decimal addends in tenths and hundredths
15	B	Subtraction	Naming the missing addend in a decimal subtraction problem
15	B	Multiplication	Multiplying decimal fractions with no more than two decimal places in the product
16	A	Subtraction	Subtracting mixed numerals with renaming

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE:

8. Continued

LEVEL	STEP	STRAND	CONCEPT
16	A	Multiplication	Computing the product of two mixed numerals
16	A	Division	Dividing mixed numerals
18	A	Addition	Adding decimals to thousandths
18	A	Subtraction	Subtracting decimals to thousandths
18	A	Multiplication/ Division	Multiplying and dividing by powers to ten
18	B	Multiplication	Multiplying decimal fractions with no more than three decimal places in the product
18	B	Division	Dividing decimal fractions through thousandths
19	A	Division	Extending the operation of division with decimals
22	C	Addition/Subtraction	Adding and subtracting rational numbers
22	C	Mutliplication	Multiplying rational numbers

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 8. Continued

LEVEL	STEP	STRAND	CONCEPT
22	C	Division	Dividing rational numbers

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 9. Use concepts and computational skills in keeping personal records such as banking and savings accounts, information for insurance and income tax, records of interest, and similar consumer affairs such as planning for earning a living and solving problems of housing.*

LEVEL	STEP	STRAND	CONCEPT
18	Z	Multiplication	Using percents in solving problems dealing with profit and loss
21	B	Number Sentences and Phrases	Solving word problems involving commission, interest, and discount
21	Z	Number Sentences and Phrases	Solving consumer problems (compound interest and instaliment buying)

*The teacher needs to supplement these areas, specifically in keeping personal records, income tax and budgets.

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 10. Demonstrate that to find the measure of an object, a comparison is made.

LEVEL	STEP	STRAND	CONCEPT
2	B	Measurement	Communicating measure through the use of non-standard units
3	A	Measurement	Measuring to the nearest inch
3	C	Measurement	Measuring to the nearest half-inch
7	B	Measurement	Measuring line segments to the nearest one-fourth inch
8	B	Measurement	Using inches, feet, yards, and dozen in measurement
12	A	Measurement	Measuring a line segment to the nearest one-eight inch
12	B	Measurement	Introducing the units of meter, millimeter, and centimeter in the metric system
13	A	Measurement	Using metric unit of length: mm, cm, dm, m

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 11. Identify the kind of unit to be used for determining the measure of a particular object.

LEVEL	STEP	STRAND	CONCEPT
2	B	Measurement	Communicating measure through the use of nonstandard units
3	A	Measurement	Measuring to the nearest unit
3	C	Measurement	Measuring to the nearest half-inch
7	B	Measurement	Measuring line segments to the nearest one-fourth inch
8	B	Measurement	Using inches, feet, yards, and dozen in measurement
12	A	Measurement	Measuring a line segment to the nearest one eight-inch
12	B	Measurement	Introducing the units of meter, millimeter, and centimeter in the metric system
13	A	Measurement	Using meter units of lenth: mm, cm, dm, m
			COMP also provides for the teaching of units of weight,volume, area, and capacity.

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 12. Count various combinations of paper money and coins up to $100, and make change from $100 for purchases under that amount.*

LEVEL	STEP	STRAND	CONCEPT
1	C	Measurement	Introducing penny, nickel, and dime
4	A	Measurement	Counting money to 50 cents
5	A	Measurement	Making change to 50 cents
6	B	Measurement	Counting money to $1.00
6	C	Measurement	Making change to $1.00
9	B	Measurement	Making change involving amounts of money to $10

* The COMP scope and sequence stops at making change from $10: However, this concept can be extended up to $100 in a later level.

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 13. Use tables of weights/mass to convert tons to pounds to ounces, or kilograms to grams, and use tables of volumes to convert gallons to quarts to pints, or liters to milliliters.

LEVEL	STEP	STRAND	CONCEPT
4	B	Measurement	Introducing the cup, pint, and quart as standard units of liquid measure
6	A	Measurement	Extending liquid measure to gallon
11	B	Measurement	Weight -- changing ounces to pounds, pounds to tons, and their reversals
17	A	Measurement	Renaming the metric units of weight as other units of weight in the metric system
20	A	Measurement	Renaming metric units of capacity as other units of capacity in the metric system
23	C	Measurement	Extending conversions within the metric system
25	B	Measurement	Metric units of mass and capacity

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 14. Use a meter stick or yard stick to measure lengths (dimensions) and, given the formulas, use the measures found to compute areas of surfaces and volumes.

LEVEL	STEP	STRAND	CONCEPT
Measure			
3	A	Measurement	Measuring to the nearest inch
3	C	Measurement	Measuring to the nearest half-inch
7	B	Measurement	Measuring line segments to the nearest one-fourth inch
8	B	Measurement	Using inches, feet, yards, and dozen in measurement
12	A	Measurement	Measuring a line segment to one-eight inch
12	B	Measurement	Introducing units of meter, millimeter, and centimeter in the metric system
13	A	Measurement	Using units of length in the metric system
19	A	Measurement	Measuring to the nearest unit
Area. Volume			
8	B	Geometry	Measuring the area of a region

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 14. Continued

LEVEL	STEP	STRAND	CONCEPT
Area, Volume			
12	B	Geometry	Introducing volume of cubes and simple closed surfaces
14	C	Geometry	Naming the area of a square, rectangle, parallelogram
15	A	Geometry	Solving by formula the surface area on volume of a rectangular prism
17	A	Geometry	Naming the area of a triangle
18	C	Geometry	Finding the area of a circle
21	B	Geometry	Finding the area of a trapezoid
23	D	Geometry	Finding the surface area and volume of pyramids and prisms
24	B	Geometry	Finding the surface area of cones, cylinders, and spheres
24	C	Geometry	Finding the volume of cones, cylinders, and spheres

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 15. Add, subtract, multiply, and divide using measures, and solve problems involving measures.

LEVEL	STEP	STRAND	CONCEPT
4	B	Measurement	Introducing cup, pint, and quart as the standard units of liquid measure
6	A	Measurement	Extending liquid measure to gallon
8	B	Measurement	Using inches, feet, yards, and dozen in measurement
9	A	Measurement	Solving problems involving time
10	B	Measurement	Reading the temperature on a Fahrenheit thermometer
11	B	Measurement	Weight--changing ounces to pounds, pounds to tons, and their reversals
13	A	Measurement	Metric units of length (mm, cm, dm, m)
14	A	Addition	Naming the sum of denominate numbers
14	A	Subtraction	Naming the missing addends in denominate numbers given the sum and one addend
17	A	Measurement	Renaming the metric units of weight as other units of weight in the metric system
19	Z	Measurement	Finding the greatest possible error

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 15. Continued

LEVEL	STEP	STRAND	CONCEPT
20	A	Measurement	Renaming metric units of capacity as other units of capacity in the metric system
23	C	Measurement	Extending conversions within the metric system
23	D	Measurement	Converting to metric units of length

*Measures are also used in the areas that involve computing area, volume, perimeter.

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 16. Estimate and verify the measure of a property of an object, and compare two similar objects by comparing their measures.

LEVEL	STEP	STRAND	CONCEPT
3	A	Measurement	Measuring to the nearest inch
3	C	Measurement	Measuring to the nearest half–inch
7	B	Measurement	Measuring line segments to the n earest one–fourth inch
8	B	Geometry	Measuring the area of a region
8	B	Measurement	Using inches, feet. yards, and dozen in measurement
11	B	Measurement	Weight––changing ounces to pounds, pourds to tons, and their reversals
12	A	Measurement	Measuring a line segment to one eight–inch
12	B	Geometry	Introducing volume of cubes and simple closed surfaces
12	B	Measurement	Introducing the units of meter, millimeter, and centimeter in the metric system
13	A	Measurement	Metric units of length (mm,cm, dm, m)
13	B	Geometry	Naming the perimeter of a polygon

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 16. Continued

LEVEL	STEP	STRAND	CONCEPT
14	B	Geometry	Identifying similar and congruent polygons
14	C	Geometry	Naming the area of a square, rectangle, parallelogram
15	A	Geometry	Solving by formula the surface area or the volume of a rectangular prism
17	A	Geometry	Naming the area of a triangle
17	A	Measurement	Metric units of weight
18	B	Geometry	Finding the circumference of a circle
18	C	Geometry	Finding the area of a circle
21	B	Geometry	Finding the area of a trapezoid
23	D	Geometry	Surface area and volume of pyramids and prisms
24	A	Measurement	Metric units of area
24	B	Geometry	Surface area of cones, cylinders, and spheres

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE:

16. Continued

LEVEL	STEP	STRAND	CONCEPT
24	B	Measurement	Metric units of volume
24	C	Geometry	Volume of cones, cylinders, and spheres

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 17. Demonstrate knowledge of measuring devices (including metric, direct, and indirect) by explaining their purposes and use a variety of measuring devices for personal, shop , or leisure time needs.

LEVEL	STEP	STRAND	CONCEPT
2	A	Measurement	Telling time to the hour
2	B	Measurement	Communicating measure through the use of nonstandard units
3	A	Measurement	Measuring to the nearest inch
3	B	Measurement	Telling time to the half hour
3	C	Measurement	Measuring to the nearest half-inch
4	B	Measurement	Introducing the cup, pint, and quart as standard units of liquid measure
5	B	Measurement	Telling time to quarter of an hour
6	A	Measurement	Extending liquid measure to gallon
7	B	Measurement	Measuring line segments to the nearest one-fourth inch
8	A	Measurement	Telling time to the nearest minute
8	B	Measurement	Using inches, feet, yards, and dozen in measurement

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 17. Continued

LEVEL	STEP	STRAND	CONCEPT
10	B	Measurement	Reading the temperature on a Fahrenheit thermometer
11	B	Measurement	Weight--changing ounces to pounds, pounds to tons, and their reversals
12	A	Measurement	Measuring a line segment to the nearest one-eighth inch
12	B	Measurement	Introducing the units of meter, millimeter, and centimeter in the metric system
13	A	Measurement	Using metric units of length (mm,cm, dm, m)
14	A	Measurement	Using a protractor to measure angles
17	A	Measurement	Renaming the metric units of weight as other units
19	A	Measurement	Measuring to the nearest unit
20	A	Measurement	Renaming metric units of capacity as other units of capacity in the metric system
22	B	Geometry	Ruler and compass constructions

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 18. Demonstrate an understanding of the concepts of size and shape by describing the properties of objects in terms of volume, weight/mass, and dimensions.

LEVEL	STEP	STRAND	CONCEPT
3	A	Measurement	Measuring to the nearest inch
3	C	Measurement	Measuring to the nearest half-inch
7	B	Measurement	Measuring line segments to the nearest one-fourth inch
8	B	Geometry	Measuring the area of a region
8	B	Measurement	Using inches, feet, yards, and dozen in measurement
11	B	Measurement	Weight -- changing ounces to pounds, pounds to tons, and their reversals.
12	A	Measurement	Measuring a line segment to one eight inch
12	B	Geometry	Introducing volume of cubes and simple closed surfaces
12	B	Measurement	Introducing the units of meter, millimeter and centimeter in the metric system
13	A	Measurement	Using metric units of length.. mm, cm, dm, m
14	C	Geometry	Naming the area of a square, rectangle, parallelogram

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 18. Continued

LEVEL	STEP	STRAND	CONCEPT
15	A	Geometry	Solving by formula the surface area or volume of a rectangular prism
17	A	Geometry	Naming the area of a triangle
17	A	Measurement	Renaming the metric units of weight as other units of weight in the metric system
18	B	Geometry	Finding the circumference of a circle
18	C	Geometry	Finding the area of a circle
19	A	Measurement	Measuring to the nearest unit
21	B	Geometry	Finding the area of a trapezoid
24	A	Measurement	Metric units of area
24	B	Geometry	Surface area of cones, cylinders, and spheres
24	B	Measurement	Metric units of volume
24	C	Geometry	Volume of cones, cylinders, and shperes

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 19. Demonstrate an understanding of the concepts of time, place, distance, and quantity by describing "when", "where", "how far" "how many", and "how much". *

LEVEL	STEP	STRAND	CONCEPT
4	B	Addition and Subtraction	Solving word problems involving addition and subtraction with a sum of 15 or less
5	B	Addition and Subtraction	Solving word problems involving addition and subtraction with sum of 18 or less
6	C	Addition and Subtraction	Solving word problems involving renaming two-digit numerals with two or more addends
6	C	Multiplication	Solving word problems involving multiplication with 2,3,4, or 5 as a factor
7	B	Addition and Subtraction	Solving word problems involving addition and subtraction with three-digit numerals
7	B	Multiplication and Division	Solving word problems involving multiplication and division with products not greater than 63
8	B	Multiplication and Division	Solving word problems involving multiplication and division with products not greater than 81

* These concepts are developed in the problem solving areas of CCMP as listed above.

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 19. Continued

LEVEL	STEP	STRAND	CONCEPT
9	A	Sets	Solving two--stage word problems
9	A	Measurement	Solving problems involving time
9	B	Multiplication and Division	Solving word problems involving multiplication and division
10	B	Addition and Subtraction	Solving word problems involving addition or subtraction of fractions with like denominators
10	B	Multiplication and Division	Solving word problems using multiplication involving 3 and 4–digit factors by a one–digit factor
11	B	Multiplication and Division	Solving word problems using multiplication involving two 2–digit factors or division involving 3–digit product and 2–digit factor
12	B	Addition, Subtraction Multiplication and Division	Solving two-stage word problems
13	B	Multiplication	Solving multiplication in word problems with n–place factor

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 19. Continued

LEVEL	STEP	STRAND	CONCEPT
20	C	Number Sentences and Phrases	Solving word problems using proportion
21	B	Number Sentences and Phrases	Solving word problems involving commission, interest, and discount
21	Z	Number Sentences and Phrases	Solving consumer problems

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 20. Use ratios and percent in problems solving situations, such as making comparisons, interpreting charts, enlarging and reducing sizes, and managing personal finances.

LEVEL	STEP	STRAND	CONCEPT
18	Z	Multiplication	Using percents in solving problems dealing with profit and loss
20	A	Number Sentences and Phrases	Solving proportions
20	B	Number Sentences and Phrases	Solving percent problems
20	C	Number Sentences and Phrases	Solving word problems using proportion
21	B	Number Sentences and Phrases	Solving word problems involving commission, interest, and discount
21	Z	Number Sentences and Phrases	Solving consumer problems

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 21. Identify units by size or quantity for pricing commodities.

LEVEL	STEP	STRAND	CONCEPT
6	C	Addition and Subtraction	Solving word problems involving renaming two–digit numerals with two or more addends
6	C	Multiplication	Solving word problems involving multiplication with 2,3,4, or 5 as a factor
7	B	Multiplication and Division	Solving word problems involving multiplication and division with products not greater than 63
8	B	Multiplication and Division	Solving word problems involving multiplication and division with products not greater than 81
9	A	Sets	Solving two–stage problems, involving two sets of numbers
9	B	Multiplication and Division	Solving word problems involving multiplication and division
10	B	Multiplication and Division	Solving word problems using multiplication involving 3 and 4–digit factors by a one-digit factor or division involving a 4–digit product by a one-digit factor
11	B	Multiplication and Division	Solving word problems using multiplication involving two 2–digit factors or division involving 3–digit product (dividend) and 2–digit factor (divisor)

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 21. Continued

LEVEL	STEP	STRAND	CONCEPT
12	B	Addition, Subtraction Multiplication and Division	Solving 2–stage word problems using all 4 operations
13	B	Multiplication	Solving multiplication in word problems with n–place factors
21	Z	Number Sentences and Phrases	Solving consumer problems

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 22. Use scales to indicate location and maps to determine distances between two geographic locations.

LEVEL	STEP	STRAND	CONCEPT
Location			
5	B	Function	Number plane
9	B	Function and Graphs	Reading ordered pairs on a plane
14	B	Functions and Graphs	Locating a point on a plane using a number pair
Distance			
20	A	Number Sentences and Phrases	Solving proportions
20	C	Number Sentences and Phrases	Solving word problems using proportion

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 23. Demonstrate the understanding of the concept of the number line by using one or two scales (graph) to locate a position.

LEVEL	STEP	STRAND	CONCEPT
5	B	Function	Number plane
6	B	Order	Associating half units with points on a number line
9	B	Functions and Graphs	Reading ordered pairs graphed on a plane
14	B	Functions and Graphs	Locating a point on a plane using a number pair
16	B	Sets	Graphing solution sets on the number line
16	B	Functions and Graphs	Mapping of one set into another set
18	B	Addition	Adding integers on a number line
18	B	Subtraction	Subtracting integers on a number line
21	A	Function and Graphs	Graphing integer inequalities on a number line

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TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 23. Continued

LEVEL	STEP	STRAND	CONCEPT
21	B	Functions and Graphs	Graphing orderd pairs of integers on a plane
24	B	Functions and Graphs	Graphing real numbers
25	B	Functions and Graphs	Graphing linear equations in two variables
25	C	Functions and Graphs	Graphing linear inequalities in two variables
25	D	Functions and Graphs	Graphing systems of linear equations

TEXAS ESSENTIAL MATHEMATICS OBJECTIVES
CORRELATION WITH CONCEPTUALLY ORIENTED MATHEMATICS PROGRAM CONCEPTS

EXIT LEVEL

OBJECTIVE: 24. Read and interpret mathematical information on a chart or graphs such as circle, bar, line, and picture graphs.

LEVEL	STEP	STRAND	CONCEPT
3	A	Functions and Graphs	Introducing picture and bar graphs
5	B	Functions and Graphs	Number plane
9	B	Functions and Graphs	Reading ordered pairs graphed on a plane
11	A	Functions and Graphs	Representing data on a linear or bar graph
14	B	Functions and Graphs	Locating a point on a plane using a number pair
20	Z	Measurement	Constructing circle and divided-bar graphs
21	B	Functions and Graphs	Gr aphing ordered pairs of integers on a plane
21	Z	Measurement	Frequency distributions

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